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Sequence Listing could not be accepted due to errors.

See attached Validation Report.

If you need help call the Patent Electronic Business Center at (866) 217-9197 (toll free).

Reviewer: markspencer

Timestamp: [year=2009; month=3; day=12; hr=11; min=2; sec=14; ms=883; ]

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\*\*\*\*\*

Reviewer Comments:

E287            Invalid WIPO ST.2 date format; Use (YYYY-MM-DD) in <141>

E287            Invalid WIPO ST.2 date format; Use (YYYY-MM-DD) in <151>

E287            Invalid WIPO ST.2 date format; Use (YYYY-MM-DD) in <151>

<140> 10/565,646

<141> March 24, 2006

<150> PCT/FR2004/001952

<151> July 22, 2004

<150> FR/09161

<151> July 25, 2003

Please change the format of the dates above to (YYYY-MM-DD).

<210> 6

<211> 648

<212> PRT

<213> Bos taurus

<400> 6

Met Leu Gly Thr Tyr Asn Met Glu Val Thr Val Tyr His Arg Arg Gly

180

185

190

Ser Gln Ser Tyr Val Pro Leu Ala His Ser Ser Ala Phe Thr Ile

195

200

205

Thr Asp Gln Val Pro Phe Ser Val Ser Val Ser Gln Leu Gln Ala Leu 210  
215 220

Asp Gly Arg Asn Lys Arg Phe Leu Arg Lys Gln Pro Leu Thr Phe Ala  
225 230 235 240

"The enumeration of amino acids shall start at the first amino acid as number 1. It shall be marked below the sequence every 5 amino acids. SEQ ID # 6 amino acid number 210 is not in the correct location. Please make all necessary changes.

\*\*\*\*\*

Application No: 10565646

Version No: 2.0

**Input Set:****Output Set:**

**Started:** 2009-02-05 20:45:13.750  
**Finished:** 2009-02-05 20:47:46.221  
**Elapsed:** 0 hr(s) 2 min(s) 32 sec(s) 471 ms  
**Total Warnings:** 21  
**Total Errors:** 335  
**No. of SeqIDs Defined:** 11  
**Actual SeqID Count:** 11

| Error code | Error Description   |
|------------|---|
| E 287      | Invalid WIPO ST.2 date format; Use (YYYY-MM-DD) in <141>  |
| E 287      | Invalid WIPO ST.2 date format; Use (YYYY-MM-DD) in <151>  |
| E 287      | Invalid WIPO ST.2 date format; Use (YYYY-MM-DD) in <151>  |
| E 201      | Mandatory field data missing in <223> in SEQ ID (1)       |
| E 201      | Mandatory field data missing in <223> in SEQ ID (1)       |
| E 201      | Mandatory field data missing in <223> in SEQ ID (1)       |
| E 201      | Mandatory field data missing in <223> in SEQ ID (1)       |
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| E 201      | Mandatory field data missing in <223> in SEQ ID (1)       |
| E 201      | Mandatory field data missing in <223> in SEQ ID (1)       |
| E 320      | Wrong Nucleic Acid Designator, ga in SEQID (1)            |
| E 320      | Wrong Nucleic Acid Designator, gt in SEQID (1)            |
| E 320      | Wrong Nucleic Acid Designator, gg in SEQID (1)            |
| E 320      | Wrong Nucleic Acid Designator, ac in SEQID (1)            |
| E 320      | Wrong Nucleic Acid Designator, gc in SEQID (1)            |
| E 323      | Invalid/missing amino acid numbering SEQID (1) POS (6764) |

**Input Set:**

**Output Set:**

**Started:** 2009-02-05 20:45:13.750  
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**Total Warnings:** 21  
**Total Errors:** 335  
**No. of SeqIDs Defined:** 11  
**Actual SeqID Count:** 11

| Error code | Error Description  |
|------------|--|
| E 320      | Wrong Nucleic Acid Designator, gg in SEQID (1)   |
| E 320      | Wrong Nucleic Acid Designator, gg in SEQID (1)   |
| E 320      | Wrong Nucleic Acid Designator, ag in SEQID (1)   |
| E 201      | Mandatory field data missing in <223> in SEQ ID (3)  |
| E 201      | Mandatory field data missing in <223> in SEQ ID (3)  |
| E 201      | Mandatory field data missing in <223> in SEQ ID (3)  |
| E 201      | Mandatory field data missing in <223> in SEQ ID (3)  |
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| E 201      | Mandatory field data missing in <223> in SEQ ID (3)  |
| E 201      | Mandatory field data missing in <223> in SEQ ID (3)  |
| E 201      | Mandatory field data missing in <223> in SEQ ID (3)<br>This error has occurred more than 20 times, will not be displayed |
| E 320      | Wrong Nucleic Acid Designator, ga in SEQID (3)   |
| E 320      | Wrong Nucleic Acid Designator, gt in SEQID (3)   |
| E 320      | Wrong Nucleic Acid Designator, gg in SEQID (3)   |
| E 322      | CDS location out of range SEQID (3) At Protein count (157)   |
| E 259      | Found undefined lettercode; POS (4557) SEQID(3)  |
| E 259      | Found undefined lettercode; POS (4558) SEQID(3)  |
| E 259      | Found undefined lettercode; POS (4559) SEQID(3)  |
| E 259      | Found undefined lettercode; POS (4560) SEQID(3)  |
| E 254      | The total number of bases conflicts with running total, Input:<br>4616, Calculated : 4620 SEQID(3)                       |

**Input Set:**

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| Error code | Error Description   |
|------------|---|
| E 254      | The total number of bases conflicts with running total, Input: 4676, Calculated : 4680 SEQID(3) |
| E 254      | The total number of bases conflicts with running total, Input: 4734, Calculated : 4738 SEQID(3) |
| E 254      | The total number of bases conflicts with running total, Input: 4782, Calculated : 4786 SEQID(3) |
| E 254      | The total number of bases conflicts with running total, Input: 4830, Calculated : 4834 SEQID(3) |
| E 254      | The total number of bases conflicts with running total, Input: 4878, Calculated : 4882 SEQID(3) |
| E 254      | The total number of bases conflicts with running total, Input: 4926, Calculated : 4930 SEQID(3) |
| E 254      | The total number of bases conflicts with running total, Input: 4974, Calculated : 4978 SEQID(3) |
| E 254      | The total number of bases conflicts with running total, Input: 5022, Calculated : 5026 SEQID(3) |
| E 254      | The total number of bases conflicts with running total, Input: 5070, Calculated : 5074 SEQID(3) |
| E 254      | The total number of bases conflicts with running total, Input: 5118, Calculated : 5122 SEQID(3) |
| E 254      | The total number of bases conflicts with running total, Input: 5166, Calculated : 5170 SEQID(3) |
| E 254      | The total number of bases conflicts with running total, Input: 5214, Calculated : 5218 SEQID(3) |
| E 254      | The total number of bases conflicts with running total, Input: 5262, Calculated : 5266 SEQID(3) |
| E 254      | The total number of bases conflicts with running total, Input: 5310, Calculated : 5314 SEQID(3) |
| E 254      | The total number of bases conflicts with running total, Input: 5358, Calculated : 5362 SEQID(3) |

**Input Set:**

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**Actual SeqID Count:** 11

| Error code | Error Description  |
|------------|--|
| E 254      | The total number of bases conflicts with running total, Input: 5406, Calculated : 5410 SEQID(3)  |
| E 254      | The total number of bases conflicts with running total, Input: 5463, Calculated : 5467 SEQID(3)  |
| E 254      | The total number of bases conflicts with running total, Input: 5523, Calculated : 5527 SEQID(3)  |
| E 254      | The total number of bases conflicts with running total, Input: 5583, Calculated : 5587 SEQID(3)<br>This error has occurred more than 20 times, will not be displayed |
| E 320      | Wrong Nucleic Acid Designator, gc in SEQID (3)   |
| E 322      | CDS location out of range SEQID (3) At Protien count (476)   |
| E 323      | Invalid/missing amino acid numbering SEQID (3) POS (6768)  |
| E 322      | CDS location out of range SEQID (3) At Protien count (505)   |
| E 320      | Wrong Nucleic Acid Designator, gg in SEQID (3)   |
| E 322      | CDS location out of range SEQID (3) At Protien count (573)   |
| E 320      | Wrong Nucleic Acid Designator, gg in SEQID (3)   |
| E 322      | CDS location out of range SEQID (3) At Protien count (603)   |
| E 320      | Wrong Nucleic Acid Designator, ag in SEQID (3)   |
| E 322      | CDS location out of range SEQID (3) At Protien count (649)   |
| E 253      | The number of bases differs from <211> Input: 8146   |
| E 323      | Invalid/missing amino acid numbering SEQID (5) POS (2323)  |
| E 320      | Wrong Nucleic Acid Designator, ga in SEQID (5)   |
| E 320      | Wrong Nucleic Acid Designator, gt in SEQID (5)   |
| E 323      | Invalid/missing amino acid numbering SEQID (5) POS (4694)  |
| E 320      | Wrong Nucleic Acid Designator, ac in SEQID (5)   |

**Input Set:**

**Output Set:**

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**Total Errors:** 335  
**No. of SeqIDs Defined:** 11  
**Actual SeqID Count:** 11

| Error code | Error Description   |
|------------|---|
| E 320      | Wrong Nucleic Acid Designator, gc in SEQID (5)  |
| E 320      | Wrong Nucleic Acid Designator, ag in SEQID (5)<br>This error has occurred more than 20 times, will not be displayed |
| W 112      | Upper case found in data; Found at position(0) SeqId(6)   |
| W 112      | Upper case found in data; Found at position(3) SeqId(6)   |
| E 259      | Found undefined lettercode; POS (6) SEQID(6)  |
| W 112      | Upper case found in data; Found at position(6) SeqId(6)   |
| E 259      | Found undefined lettercode; POS (8) SEQID(6)  |
| E 342      | 'n' position not defined found at POS: 9 SEQID(6)   |
| W 112      | Upper case found in data; Found at position(9) SeqId(6)   |
| E 259      | Found undefined lettercode; POS (12) SEQID(6)   |
| W 112      | Upper case found in data; Found at position(12) SeqId(6)  |
| E 259      | Found undefined lettercode; POS (15) SEQID(6)   |
| W 112      | Upper case found in data; Found at position(15) SeqId(6)  |
| E 259      | Found undefined lettercode; POS (18) SEQID(6)   |
| W 112      | Upper case found in data; Found at position(18) SeqId(6)  |
| E 259      | Found undefined lettercode; POS (20) SEQID(6)   |
| W 112      | Upper case found in data; Found at position(21) SeqId(6)  |
| E 259      | Found undefined lettercode; POS (24) SEQID(6)   |
| W 112      | Upper case found in data; Found at position(24) SeqId(6)  |
| E 259      | Found undefined lettercode; POS (26) SEQID(6)   |
| W 112      | Upper case found in data; Found at position(27) SeqId(6)  |
| E 259      | Found undefined lettercode; POS (30) SEQID(6)   |

**Input Set:**

**Output Set:**

**Started:** 2009-02-05 20:45:13.750  
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**No. of SeqIDs Defined:** 11  
**Actual SeqID Count:** 11

| Error code | Error Description  |
|------------|--|
| W 112      | Upper case found in data; Found at position(30) SeqId(6)   |
| E 259      | Found undefined lettercode; POS (32) SEQID(6)  |
| W 112      | Upper case found in data; Found at position(33) SeqId(6)   |
| E 259      | Found undefined lettercode; POS (35) SEQID(6)  |
| E 342      | 'n' position not defined found at POS: 36 SEQID(6)   |
| W 112      | Upper case found in data; Found at position(36) SeqId(6)   |
| E 259      | Found undefined lettercode; POS (38) SEQID(6)  |
| W 112      | Upper case found in data; Found at position(39) SeqId(6)   |
| E 259      | Found undefined lettercode; POS (41) SEQID(6)  |
| E 342      | 'n' position not defined found at POS: 42 SEQID(6)   |
| W 112      | Upper case found in data; Found at position(42) SeqId(6)   |
| E 259      | Found undefined lettercode; POS (44) SEQID(6)  |
| W 112      | Upper case found in data; Found at position(45) SeqId(6)   |
| E 259      | Found undefined lettercode; POS (47) SEQID(6)  |
| E 259      | Found undefined lettercode; POS (49) SEQID(6)<br>This error has occurred more than 20 times, will not be displayed |
| E 323      | Invalid/missing amino acid numbering SEQID (6) POS (209)   |
| E 323      | Invalid/missing amino acid numbering SEQID (6)at Protein (210)   |
| E 323      | Invalid/missing amino acid numbering SEQID (6) POS (214)   |
| E 323      | Invalid/missing amino acid numbering SEQID (6)at Protein (215)   |
| E 323      | Invalid/missing amino acid numbering SEQID (6) POS (219)   |
| E 323      | Invalid/missing amino acid numbering SEQID (6)at Protein (220)   |
| E 323      | Invalid/missing amino acid numbering SEQID (6) POS (224)   |

**Input Set:**

**Output Set:**

**Started:** 2009-02-05 20:45:13.750  
**Finished:** 2009-02-05 20:47:46.221  
**Elapsed:** 0 hr(s) 2 min(s) 32 sec(s) 471 ms  
**Total Warnings:** 21  
**Total Errors:** 335  
**No. of SeqIDs Defined:** 11  
**Actual SeqID Count:** 11

| Error code | Error Description   |
|------------|---|
| E 323      | Invalid/missing amino acid numbering SEQID (6)at Protein (225)  |
| E 323      | Invalid/missing amino acid numbering SEQID (6) POS (229)  |
| E 323      | Invalid/missing amino acid numbering SEQID (6)at Protein (230)  |
| E 323      | Invalid/missing amino acid numbering SEQID (6) POS (234)  |
| E 323      | Invalid/missing amino acid numbering SEQID (6)at Protein (235)  |
| E 323      | Invalid/missing amino acid numbering SEQID (6) POS (239)  |
| E 323      | Invalid/missing amino acid numbering SEQID (6)at Protein (240)  |
| E 323      | Invalid/missing amino acid numbering SEQID (6) POS (244)  |
| E 323      | Invalid/missing amino acid numbering SEQID (6)at Protein (245)<br>This error has occurred more than 20 times, will not be displayed |
| E 331      | Count of Protein differs from the <211> tag Input: 648  |
| W 213      | Artificial or Unknown found in <213> in SEQ ID (7)  |
| W 213      | Artificial or Unknown found in <213> in SEQ ID (8)  |
| W 213      | Artificial or Unknown found in <213> in SEQ ID (9)  |
| W 213      | Artificial or Unknown found in <213> in SEQ ID (10)   |
| W 213      | Artificial or Unknown found in <213> in SEQ ID (11)   |

SEQUENCE LISTING

<110> INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE

Culmouden, Ahmad

Julien, Raymond

Lafort, Marie-Piere,

Leveziel, Hubert

<120> USE OF THE SILVER GENE FOR THE AUTHENTIFICATION OF  
THE ORIGINAL BREED OF ANIMAL POPULATIONS AND  
THEIR DERIVATIVE PRODUCTS

<130> 0508-1156

<140> 10565646

<141> 2006-03-24

<150> PCT/FR2004/001952

<151> July 22, 2004

<150> FR/09161

<151> July 25, 2003

<160> 11

<170> PatentIn version 3.1

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<211> 8146

<212> DNA

<213> Bos taurus

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                   1                       5  
  
 ctt ctc cat gtg gct ctg atg ggt gtt ctt ctg gct gta ggg acc aca 101  
 Leu Ieu His Val Ala Leu Met Gly Val Leu Leu Ala Val Gly Thr Thr  
   10                 15                 20  
  
 gaa g gtgagtggtt gatgttggac atgaaacaagt gtgaatttgg ggttgcacac 155  
 Glu  
 25  
  
 ctgctcttgtt tttctctcc ctaaaatgg aagatatcgt agtgcttcag gtgtctccca 215  
 cccatgttcat ttatgttggaa catggcaactc tgagtcctt ccccacatgtt agatgggtt 275  
 gcatgtgtt tcaggcaactt ggaggtaac ctgaaacaa ccccatcttctt ctggatgggt 335  
 gagagaacac tatgttcttgg tggccctaatttggatgtc tctgaatagt gagctggaaac 395  
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 Leu Arg Ile Lys Ala Trp Asn Arg Gln Leu Tyr Pro Glu Trp Thr Glu  
 40 45 50

agc cag ggg cct gac tgc tgg aga g gtaggaactt ggcaatttcc 2456  
Ser Gln Gly Pro Asp Cys Trp Arg  
55 60

ttcag gt ggc cac ata tcc ctg aag gtc agc aat gat ggg cct aca ctg 2625  
     Gly Gly His Ile Ser Leu Lys Val Ser Asn Asp Gly Pro Thr Leu  
              65                70                75

att ggg gca aat gct tcc ttc tct att gcc ttg cac ttt cct aaa agc 2673  
Ile Gly Ala Asn Ala Ser Phe Ser Ile Ala Leu His Phe Pro Lys Ser  
aa aa

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caa aag gtg ctg cca gat ggg cag gtc atc tgg gcc aac aac acc atc 2721
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ccccccatcc ccccccaccc ccccccaccc ccccccaccc ccccccaccc ccccccaccc 2868



|  |     |      |     |
|--|-----|------|-----|
| agaagctgac agaaaagaaga acttatggtt ctcaacttct ctgactccaa tccccag ac |     | 4734 |     |
|  | Asp |      |     |
| cag gtg ccc ttc tct gtg agt gtg tct cag ctg cag gcc ttg gat gga    |     | 4782 |     |
| Gln Val Pro Phe Ser Val Ser Val Gln Leu Gln Ala Leu Asp Gly        |     |      |     |
| 215  | 220 | 225  |     |
| agg aac aag cgc ttc ctg aga aag cag cct ctg acc ttt gcc ctc cag    |     | 4830 |     |
| Arg Asn Lys Arg Phe Leu Arg Lys Gln Pro Leu Thr Phe Ala Leu Gln    |     |      |     |
| 230  | 235 | 240  |     |
| ctc cat gat ccc agt ggc tat ttg gct ggg gct gac ctt tcc tac acc    |     | 4878 |     |
| Ieu His Asp Pro Ser Gly Tyr Leu Ala Gly Ala Asp Leu Ser Tyr Thr    |     |      |     |
| 245  | 250 | 255  |     |
| tgg gac ttt ggt gac agt aca ggg acc ctg atc tct cgg gca ctc acg    |     | 4926 |     |
| Trp Asp Phe Gly Asp Ser Thr Gly Thr Leu Ile Ser Arg Ala Leu Thr    |     |      |     |
| 260  | 265 | 270  | 275 |
| gtc act cac act tac cta gag tct ggc cca gtc act gca cag gtg gtg    |     | 4974 |     |
| Val Thr His Thr Tyr Leu Glu Ser Gly Pro Val Thr Ala Gln Val Val    |     |      |     |
| 280  | 285 | 290  |     |
| ctg cag gct gcc att cct ctc acc tcc tgt ggc tcc tct cca gtt cca    |     | 5022 |     |
| Ieu Gln Ala Ala Ile Pro Leu Thr Ser Cys Gly Ser Ser Pro Val Pro    |     |      |     |
| 295  | 300 | 305  |     |
| ggc act aca gat agg cat gtg aca act gca gag gct cct gga acc aca    |     | 5070 |     |
| Gly Thr Thr Asp Arg His Val Thr Ala Glu Ala Pro Gly Thr Thr        |     |      |     |
| 310  | 315 | 320  |     |
| gtc ggc caa gtg cct act aca gaa gtc atg ggc acc aca cct ggc cag    |     | 5118 |     |
| Ala Gly Glu Val Pro Thr Glu Val Met Gly Thr Thr Pro Gly Gln        |     |      |     |
| 325  | 330 | 335  |     |
| gtg cca act gca gag gcc cct ggc acc aca gtt ggg tgg gtg cca acc    |     | 5166 |     |
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| 340  | 345 | 350  | 355 |
| aca gag gat gta ggt acc aca cct gag cag gtg gca acc tcc aaa gtc    |     | 5214 |     |
| Thr Glu Asp Val Gly Thr Thr Pro Glu Gln Val Ala Thr Ser Lys Val    |     |      |     |
| 360  | 365 | 370  |     |
| tta agt aca aca cca gtg gag atg cca act gca aaa ggt aca ggt agg    |     | 5262 |     |
| Leu Ser Thr Thr Pro Val Glu Met Pro Thr Ala Lys Ala Thr Gly Arg    |     |      |     |
| 375  | 380 | 385  |     |
| aca cct gaa gtg tca act aca gag ccc tct gga acc aca gtt aca cag    |     | 5310 |     |
| Thr Pro Glu Val Ser Thr Thr Glu Pro Ser Gly Thr Thr Val Thr Gln    |     |      |     |
| 390  | 395 | 400  |     |
| gga aca act cca gag ctg gtg gag acc aca gct gga gag gtg tcc act    |     | 5358 |     |
| Gly Thr Thr Pro Glu Leu Val Glu Thr Thr Ala Gly Glu Val Ser Thr    |     |      |     |
| 405  | 410 | 415  |     |

|  |  |
|--|--|
| cct gag cct gcg ggt tca aat act agc tca ttc atg cct aca gaa ggt<br>Pro Glu Pro Ala Gly Ser Asn Thr Ser Ser Phe Met Pro Thr Glu Gly<br>420 425 430 435  | 5406   |
| act gca g gtaagggggc caccatagaat gagttcatag aggtggggca tttgtcacag<br>Thr Ala   | 5463   |
| <br>   |  |
| ctctgaagac ctgaaaagaat tgctcaggac ccagatgtta ctcatactt agettagcag<br>ttggatccer raaatggat cactgtttt aaaacccrct aagtccctt taatggrraca<br>gaatagatcc aggttccgg aaaccgggtt ttcttccttag ggccagggtt gagaacctt<br>ttcttccttcc tgaagaaag ttccggaaag agttgtgtat catttgggtt tggtgtccag<br>tcatgttgc ctttttgta ctcatggac tatggccrcc acgggttc tgccatagaa<br>attttccggg caagaaactt ggatgggtt ggccattttcc ttccggggg attttccctt<br>cccgggggaaat tggcgggtt attttttcc acggccacct agaaaatccc<br>atgtgtatc tagataatc ttatccatc ttatccgtt aagtgtaaac aracaatcc<br>ttctgacacc acttccacc cttggattcc catccaaag taggttacc tggaaattgtt<br>gttggaaatac taaaaggaa qaagtgatc tgacttacaa catgtcaat<br>gttgcacca ggacttggca cagtgttggg tttgtataaac atttggatg tttaaaattc<br>tgacttacac ctttttttttcc ttggggccatc attttttcc ggccatttttcc ttatccaaaa<br>aatggaggtt tccacttcc ttgtgtatc aagcttggat ccgttagtcc tgacttacc<br>ttggggaaatggc ttgtgtggc ttgtttttcc ttgtgttacc ttgtgttgc ttgtgttgc<br>ttatccctt cttccag gc tcc ctg agt ccc ctg ccg gat gac act gcc<br>Gly Ser Ieu Ser Pro Ieu Pro Asp Asp Thr Ala<br>440 445 | 5523<br>5583<br>5643<br>5703<br>5763<br>5823<br>5883<br>5943<br>6003<br>6063<br>6123<br>6183<br>6243<br>6303<br>6352 |
| <br>   |  |
| acc tta gtc ctg gag aag cgc caa gcc ccc ctg gat tat ttttgc tat<br>Thr Leu Val Leu Glu Lys Arg Gln Ala Pro Leu Asp Cys Val Leu Tyr<br>450 455 460   | 6400   |
| <br>   |  |
| cgc tat ggc tcc ttt tcc ctc acc ctg gac att gtc c gtggatctt<br>Arg Tyr Gly Ser Phe Ser Leu Thr Leu Asp Ile Val<br>465 470 475  | 6447   |
| <br>   |  |
| cttacattgt ccttaagtcg gtggggggat ggtgtgtctg cttagggttg cccatggaa<br>gcacacccggtaa gaatggatc ttcaatggaa caaggaaat acccagatcc cagggttcc<br>atatgaaggc agaatggat tagggggca gccccggac cttctggcc atggggcccttgg<br>ggggaggata agttagaggag tctcagactt aaaaaaaaaatcc tccaaacttgc cag ag<br>Gln   | 6507<br>6567<br>6627<br>6682   |
| <br>   |  |
| ggt att gag agt gct gag atc cta cag gct gtg tca tcc agt gaa gga<br>Gly Ile Glu Ser Ala Glu Ile Leu Gln Ala Val Ser Ser Ser Glu Gly<br>480 485 490  | 6730   |
| <br>   |  |
| gat gca ttt gag ctg act gtg tct tgc caa ggc gg gtggatgtcc<br>Asp Ala Phe Glu Leu Thr Val Ser Cys Gln Gly<br>495 500  | 6775   |
| <br>   |  |
| cacgggttgc ctgagaactc ctgggggtgac tgcgttccctg ttctctgggtt tetagtgcc  | 6835   |
| cttccccatc tccctgtacgt aagetgacat ctetccccatc g cta ccc aag gaa gcc  | 6890   |

|  |                     |      |
|--|---------------------|------|
|  | Leu Pro Lys Glu Ala |      |
|  | 510                 |      |
| tgc atg gac atc tca tcg cca ggg tgt cag ctg cct gcc cag cgg ctg    |                     | 6938 |
| Cys Met Asp Ile Ser Ser Pro Gly Cys Gln Leu Pro Ala Gln Arg Leu    |                     |      |
| 515  | 520                 | 525  |
| tgt cag cct gtg ccc ccc agc cca gcc tgc cag ctg gtt ttg cac cag    |                     | 6986 |
| Cys Gln Pro Val Pro Pro Ser Pro Ala Cys Gln Leu Val Leu His Gln    |                     |      |
| 530  | 535                 | 540  |
| gta ctg aag ggt ggc tca ggg acc tac tgc ctc aat gtg tct ttg gct    |                     | 7034 |
| Val Leu Lys Gly Gly Ser Gly Thr Tyr Cys Leu Asn Val Ser Leu Ala    |                     |      |
| 545  | 550                 | 555  |
| gat gcc aat agc ctg gcg atg gtc agc acc cag ctt gtc atg cct g      |                     | 7080 |
| Asp Ala Asn Ser Leu Ala Met Val Ser Thr Gln Leu Val Met Pro        |                     |      |
| 560  | 565                 | 570  |
| gttaggttgtt ggacaagagg taggatgaag acacggggag atggtagagg ttacctacta |                     | 7140 |
| gaggaagcag aactgaatg cagccgtatc tggattcca cccatag gg caa gaa       |                     | 7195 |
| Gly Gln Glu  |                     |      |
| 575  |                     |      |
| gca ggc ctc agg cag gct cct ctg ttc gtg ggc atc ttg ctg gtg cta    |                     | 7243 |
| Ala Gly Leu Arg Gln Ala Pro Leu Phe Val Gly Ile Leu Leu Val Leu    |                     |      |
| 580  | 585                 | 590  |
| aca gct ttg ttg ctt gca tct ctg ata tac ag gtgagatccc cgccatctg    |                     | 7295 |
| Thr Ala Leu Leu Ala Ser Leu Ile Tyr Arg                            |                     |      |
| 595  | 600                 |      |
| ctccccactcc tttaaccctt attaccacca ccactcttcc tcatggaaag aagaaac    |                     |      |